

Avoidance and Minimization

For Greensboro Loop/US 29 Interchange Redesign

**Greensboro Eastern Urban Loop
Guilford County**

TIP Projects U-2525 B and C

North Carolina Department of Transportation



**CONCURRENCE POINT 4A Revisit
January 21, 2010**

Prepared By

Lisa M. Feller, PE
Project Planning Engineer
Project Development and Environmental Analysis Branch
North Carolina Department of Transportation

NEPA/404 MERGER TEAM MEETING

TIP Project Nos. U-2525B and C
WBS Nos. 34821.1.3 and 34821.1.4

Greensboro Eastern Urban Loop
From US 70 Relocation to SR 2303 (Lawndale Drive)
Guilford County

Project Description and Brief History

The Greensboro Eastern Urban Loop is a pipeline project for which the environmental documents were completed before the NEPA/404 Merger process was initiated. Information concerning the documents' approval dates is listed below:

- | | |
|---|-----------------|
| • Draft Environmental Impact Statement (DEIS) | August 19, 1992 |
| • Final Environmental Impact Statement (FEIS) | August 12, 1994 |
| • Record of Decision (ROD) | March 7, 1995 |

The proposed action for the FEIS is the construction of the Greensboro Eastern Urban Loop, a multi-lane freeway. The proposed limits are from north of the interchange with I-85 and the proposed I-85 Bypass to Lawndale Drive north of Greensboro. The project is approximately 12.1 miles in length. The selected alternative is the Middle Alternative. This alternative and its anticipated impacts are fully discussed in the DEIS and abbreviated FEIS. A portion of this project, U-2525A, has already been constructed.

The main purposes of the proposed Greensboro Eastern Urban Loop are to provide an efficient circumferential connection for major arterial thoroughfares such as I-85, I-40, US 29 and US 70; and to improve service for local traffic in Eastern and Northern Greensboro/Guilford County. The project will also connect to other portions of the planned Greensboro Urban Loop.

A meeting was held in the summer of 2005 to discuss how this project should be integrated into the NEPA/404 Merger process. North Carolina Department of Transportation (NCDOT), Army Corps of Engineers (USACOE), Division of Water Quality (DWQ) and State Historic Preservation Office (HPO) staff attended this meeting. The group agreed that since Segment A of the project (U-2525A) had been constructed in the late 1990's, the possibility of utilizing the other alternatives was limited. The group agreed that the Middle Alternative should be the LEDPA by elimination. The group agreed that the project should enter the NEPA/404 Merger process at Concurrence Point 2A/4A (See attached June 23, 2005 memo and August 23, 2005 meeting minutes). A CP2A/4A field meeting was held in January 2006, and the Concurrence Point 2A/4A meeting for U-2525B and U-2525C was held in April 2006. A Concurrence Point 4B meeting for U-2525B was held in September 2008 (See attached minutes).

Greensboro Urban Loop / US 29 Interchange Redesign Background

The U-2525 Corridor Protection maps were filed with the Register of Deeds office in Guilford County back in the Mid 1990's. The original interchange design at US 29 and the Loop was a Texas Box type interchange design. US 29 was designated as a future interstate route, future I-785, somewhere between 2000 and 2005. It was determined that the Texas Box type interchange could not handle the additional projected traffic, and it was not an appropriate design for an interstate to interstate intersection.

While NCDOT was in the interchange redesign stage and preparing plans for right of way acquisition, a developer obtained a permit based on the original corridor mapping and started building Quail Oaks subdivision. Once completed, the revised interchange impacted some areas outside of the original protected corridor, including areas under construction within the Quail Oaks subdivision. A public meeting was held on January 27, 2009, and projects U-2525B and U-2525C, including the interchange redesign, were shown to the public. After the January 2009 public meeting, numerous newspaper articles were written concerning the projects' impacts to Quail Oaks subdivision. Bob Morgan, Interim City Manager of Greensboro, provided this informational timeline to the Mayor and City Council:

Quail Oaks	
May 1995	Official Public Hearing revealing the corridor for the Eastern Urban Loop.
Summer 1995	GDOT commented that the interchange design at US-29 was not adequate.
Summer 1996	Corridor Protection Map issued. <i>NOTE: The corridor protection gives NCDOT the right to pre-purchase property proposed for development within the defined corridor before the property is developed. The State has 3 years to purchase the property once the property owner identifies their intent to develop the property.</i>
9/17/02	Quail Oaks development plan was sent to NCDOT as a "Project Homestead" development.
9/27/02	GDOT received comments from NCDOT indicating the development plan was not in the limits of the corridor protection map.
Summer 2004	NCDOT begins discussing the need to reevaluate the interchange design with US-29 based on traffic forecasts and the future I-785 designation of US-29.
July 2005	Quail Oaks subdivision Phase I plat was recorded.
January 2006	GDOT received revised traffic forecast from NCDOT showing the need to redesign the interchange.
October 2006	Quail Oaks subdivision Phase II plat was recorded.
Early 2007	Final Quail Oaks building permits were issued
December 2008	GDOT was notified of changes to the interchange design which impacts the recently built Quail Oaks subdivision.
January 2009	Official Public Hearing was held revealing the new interchange design.

On July 9, 2009, NCDOT personnel met with Quail Oaks subdivision residents, the developer and the builder to discuss how the project would be impacting their neighborhood and to answer any questions for them. After this meeting, NCDOT decided to look at a different interchange design in an effort to provide another alternative to impacting 16 homes in Quail Oaks subdivision.

NCDOT informed the merger team that the interchange had been redesigned and asked the team whether they wanted a field and/or office meeting to discuss the changes. The merger team requested a field visit to look at the impacted areas, and this meeting was held on December 8, 2009. (See attached December 30, 2009 site visit minutes). Chris Militscher, USEPA, asked for further clarification concerning the interchange redesign and noise issues. Attached are EPA's questions regarding the redesign and NCDOT's responses along with the January 7, 2010 memo concerning the traffic noise analysis review of the interchange redesign from Greg Smith, NCDOT Traffic Noise and Air Quality Group Supervisor.

The Jurisdictional Determination (JD) for U-2525B and U-2525C was issued on 9/26/2005 and remains valid until 9/26/2010. The area of redesign was covered in the JD visit. Within Quadrant D, there is a series of wetland areas with streams linking these areas. From visual inspection, it appears that part of the wetland area is an old pond bed. The streams located within interchange Quadrant D are both intermittent and perennial.

Avoidance and Minimization

The purpose of this meeting is to examine avoidance and minimization measures for the Greensboro Urban Loop / US 29 interchange redesign. In order to minimize impacts to the human environment, NCDOT redesigned the Greensboro Urban Loop / US 29 interchange to avoid as many of the homes in Quail Oaks subdivision as possible while minimizing impacts to the natural environment as well.

The Additional Resource Impacts Tables for the interim and ultimate interchange designs are included showing additional impacts to homes and businesses, including acquisition and relocation costs, and wetlands and streams.

Listed below are avoidance and minimizations measures that have been utilized and considered:

- Horizontal and vertical alignment adjustments, as well as slope adjustments, were made to avoid and minimize impacts.
- At the site visit, the attendees discussed whether the loop or ramp in Quadrant D could be moved to avoid the stream and wetland impacts. NCDOT owns the land on the north side of the ramp. Placing the wetland in the middle of the interchange would not be desirable due to canopy loss and viability issues.
- The attendees discussed whether other interchange designs could reduce impacts to Quadrant A and Quadrant D, and no other designs could be conceived.
- The homes in Quail Oaks are built on slab foundations and cannot be moved to another location.

**Table 1: U-2525B – Interim Design for US 29 / Greensboro Loop Interchange
Additional Resource Impacts – Old versus New Design**

File: U2525b_rdy_dsn_new_vs_old_interim.pdf

Resource	Old Design (RED)	New Design (BLACK)
Relocateses		
• Homes (Quadrant C)	1	0
Approx. Acquisition Costs	\$700,000	
• Businesses	0	0
Stream Impacts		
• Quadrant C (Ramp C only)	102 feet	15 feet
• Quadrant D (Loop D only)	0	100 feet
Wetland Impacts		
• Quadrant C (Ramp C only)	0.01 acre	0
• Quadrant D (Loop D only)	0	0.07 acre

NOTES: The design in Quadrant B did not change.

Ramp B, Ramp C, Loop A and Loop D will be built under U-2525B.

**Table 2: U-2525C – Ultimate Design for US 29 / Greensboro Loop Interchange
Additional Resource Impacts – Old versus New Design**

File: U2525b_rdy_dsn_new_vs_old_ultimate.pdf

Resource	Old Design (RED)	New Design (BLACK)
Relocateses		
• Homes (Quadrant A)	16	0
Approx. Acquisition Costs	** \$2,872,000	
• Businesses (Quadrant D)	0	1
Approx. Acquisition Costs		\$900,000
Stream Impacts		
• Quadrant C	* Same as interim	* Same as interim
• Quadrant D (Ramp D only – area beyond Loop D limits)	0	540 feet
Wetland Impacts		
• Quadrant C	* Same as interim	* Same as interim
• Quadrant D (Ramp D only – area beyond Loop D limits)	0	0.70 acre

NOTES: The design in Quadrant B did not change.

Ramp A, Ramp D, Loop C, and Flyover AC will be built under U-2525C.

* The construction of new Loop C and new Flyover AC adds no additional impacts to homes, businesses, streams or wetlands.

**There will be additional costs associated with this alternative.

June 23, 2005

Memo to: John Thomas, USACE
Sue Homewood, NCDWQ

From: Kristina Solberg, PE
PDEA Project Manager

Subject: U-2525 B and C Greensboro Northern and Eastern Loop
Guildord County, Project No. 6.498003T
'Pipeline' project entering the Merger 01 Process

Meeting: Wednesday, July 6, 2005
2:00 – 4:00 p.m.
Room 470 (PDEA Conference Room), Transportation Building
Raleigh

The Greensboro Northern and Eastern Urban Loop is a pipeline project for which the environmental documents were completed before the Merger 01 process was initiated. Most, if not all agency representatives, are new to this project. This project may also be referenced under TIPs U-2525A and I-2402D.

The purpose of the July 6th meeting is to determine where this project should enter the Merger 01 process. The purpose of this memo is to provide background information that will help facilitate discussion during the upcoming meeting.

Environmental Documents:

- | | |
|---|-----------------|
| • Draft Environmental Impact Statement (DEIS) | August 19, 1992 |
| • Final Environmental Impact Statement (FEIS) | August 12, 1994 |
| • Record of Decision (ROD) | March 7, 1995 |

At the July 6th meeting NCDOT will present an aerial with a 1000-foot wide corridor and an alignment of the horizontal design for the Middle Alternative and available environmental features mapping. Biologists recently completed fieldwork delineating the streams and wetlands and are currently compiling the information with the final report due in August 2005. A historic architecture and archaeological investigation has been requested.

The proposed action for the FEIS is the construction of the Greensboro Eastern/Northern Urban Loop, a multi-lane freeway. The proposed limits are from north of the interchange with I-85 and the proposed I-85 Bypass to Lawndale Drive north of Greensboro. The project is approximately 12.5 miles in

length. The selected alternative is the Middle Alternative. This alternative and its anticipated impacts are fully discussed in the DEIS and abbreviated FEIS.

Purposes

The main purposes of the proposed Greensboro Eastern/Northern Urban Loop are to provide an efficient circumferential connection for major arterial thoroughfares such as I-85, I-40, US 29, and US 70; and to improve service for local traffic in Eastern and Northern Greensboro/Guilford County. The project also will connect to other portions of the planned Greensboro Urban Loop.

Preferred Alternative

The following information concerns the determination of the Preferred Alternative for the referenced project (*From NCDOT memorandum to E. Lusk from W. A. Barrett, dated January 5, 2005*):

The FEIS for TIP U-2525 included evaluation for the entire Eastern/Northern Urban Loop, from north of the I-85 interchange/proposed I-85 Bypass to Lawndale Drive, approximately 12.5 miles. The FEIS identified three (3) 'no-build' alternatives: 1) a No-Build Alternative, 2) a Transportation System Management Alternative, and 3) a Multi-Modal Systems Alternative. These 'no build' alternatives were determined to not satisfy the purpose for and need of the project and were not retained for detailed study.

The FEIS for TIP U-2525 identified four (4) 'build alternatives': 1) a Widening Existing Alternative, 2) an Eastern Alternative, 3) a Middle Alternative, and 4) a Western Alternative. Two (2) Crossover Alternatives, which would allow for the possible combination of portions of the Eastern, Middle and Western alternatives were also included in the discussion of the 'build alternatives'. The Widening Existing Alternative, the Western Alternative and the two Crossover Alternatives were excluded as Preferred Alternatives for the following reasons:

- The 'Widening Existing Alternative' was determined to not be compatible with the adopted Thoroughfare Plan and did not offer a cost-effective solution to the purpose of and need for the project, and was therefor not retained for detailed study.
- The 'Western Alternative' was eliminated based on its impact on wetlands, residential relocations, and the location of the City of Greensboro's White Street Landfill.
- The identification of the Preferred Alternative for the I-85 Bypass (TIP I-2402) eliminated the need for Crossover 2.
- The elimination of the 'Western Alternative' eliminated the need for Crossover 1.

The 'Eastern Alternative' and the 'Middle Alternative' were further evaluated for determination of the preferred alignment. The Middle Alternative was selected as the Preferred Alternative based on the analysis of the environmental impacts

presented in the DEIS; citizen comments received at the Corridor Public Hearing; and review comments from federal, state, and local agencies. The FEIS listed the following reasons for the selection of the Preferred Alternative:

- Compatibility with the established Thoroughfare Plan.
- Fewer residential and business relocations.
- Fewer acres of prime farmland.
- No relocation of churches.
- No impacts to school.
- Minimizes impact to McLeansville.
- Compatibility with land use plan.
- Fewer noise impacts
- Better access to Kmart Distribution Center (major truck traffic generator).

The NCDOT Permit Application for TIP No. U-2525A /I-2440D, dated 9/20/96 (which also included the widening and relocation of a segment of US 70) expounded upon the basis for the Middle Alternative selection with discussion of the following three points:

- 1) Impacts to the McLeansville Community – the community had very strong opposition to the Eastern Alternative as they believed it was intrusive and disruptive to their rural lifestyle ('noise walls' were determined to not be a viable option). The NCDOT considered the input of affected citizens an important factor during the decision making process.
- 2) Impacts to Replacements Ltd., Inc. – during the document phase of the project, and prior to the selection of a preferred alternative, the Replacements Ltd., Inc. constructed a large, specially designed building along I-85 to house fine china and crystal. Based on the estimates to acquire the building/property and to relocate the business being in excess of \$5 million (this did not include all costs), and based on opposition from customers of the business (which were founded on the costs to taxpayers and the inconvenience to customers), the NCDOT determined that the I-85/I-85 Bypass Interchange (TIP No. I-2402D) should be relocated to avoid impacting the business.
- 3) Alignment of I-85/I-85 Bypass Interchange – The alignment for the Middle Alternative could be revised to accommodate the relocation of the interchange without compromising the design criteria for the roadway (as well as avoiding cutting through a minority neighborhood). However, the Eastern Alternative could not accommodate the shift without an undesirable "dog-leg" design, which would defeat the purpose of shifting the alignment.

Additionally, the permit application noted that the Middle Alternative better serves the existing major generators of heavy truck traffic in the area and the planned future commercial/industrial development for the area.

The Permit Application included the following additional influencing factors, most of which were included in the FEIS:

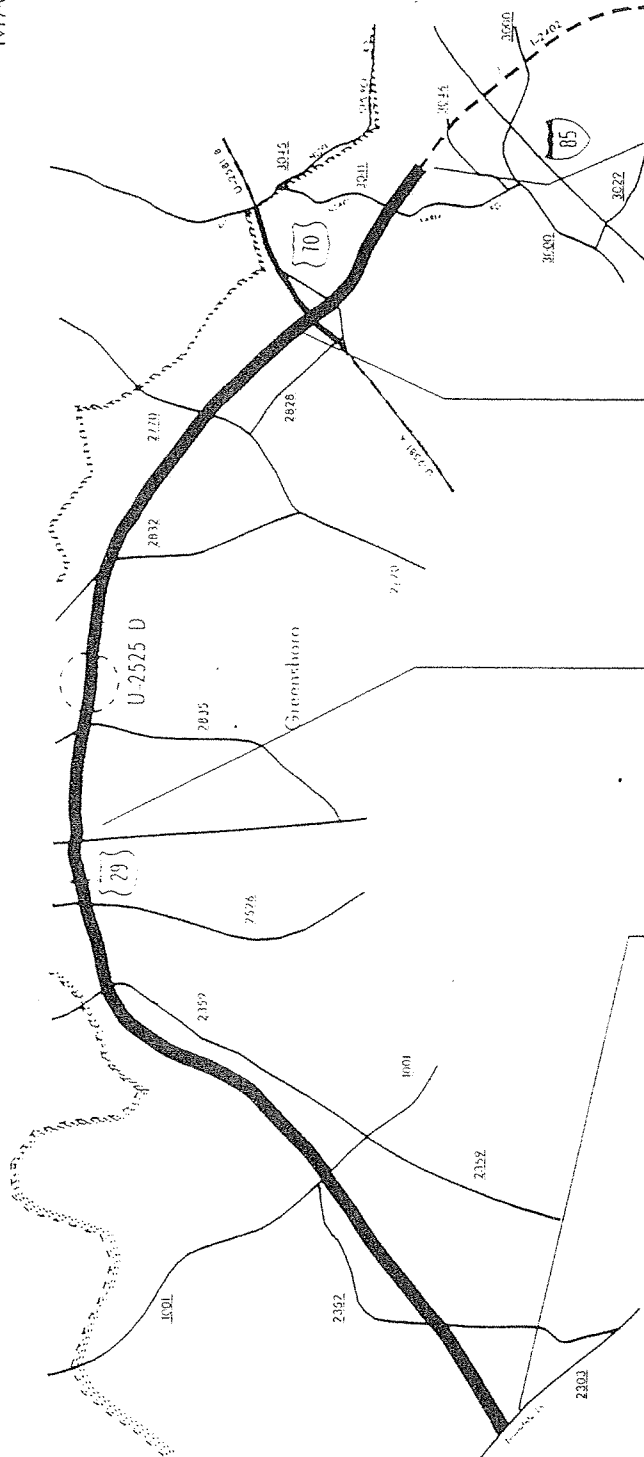
- Compatibility with the established Thoroughfare Plan.
- Compatibility with the land use plan.
- No relocation of churches.
- No impacts to schools.
- Fewer residential and business relocations.
- Fewer impacts to prime farmland.
- Fewer noise impacts.

The NCDOT determined that although the Middle Alternative impacts an estimated 2.6 acres more of wetlands than does the Eastern Alternative, the Middle Alternative is considered to be the least environmentally damaging, most practicable alternative of the two alternatives when all of the factors are considered.

PDF Attachment - Project Breakdown Map

PROJECT BREAKDOWN MAP

U-2525

[illegible]

UPDATED - 4/11/05

PROJECT SCHEDULES AND COSTS ARE ACCURATE AS OF DATE SHOWN



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

August 23, 2005

MEMORANDUM TO: Meeting Participants

FROM: Edwin A. Peters
Project Development Engineer

SUBJECT: Meeting Minutes for U-2525 B & C, Greensboro Eastern
and Northern Urban Loop, I-85 Bypass east of Greensboro
to Lawndale Drive, North of Greensboro in Guilford
County, North Carolina

On Monday, August 22, 2005 a meeting was held in the Project Development & Environmental Analysis Conference Room # 470 for the subject project. The attendees of the meeting were as follows:

Edwin Peters	PDEA
Drew Joyner	PDEA
Eric Midkiff	PDEA
John Thomas	USACE
John Hennessy	DWQ
Sue Homewood	DWQ
Danny Gardner	NCDOT
James Speer	NCDOT
Paul Fisher	NCDOT
Jackie Armstrong	NCDOT
Brett Feulner	NCDOT
Sarah McBride	DCR / SHPO
Guy Winebrenner	Mactec
John Gauthier	NCDOT

The objective of the meeting was to have a “meeting of the minds” to develop a clear schedule for the remainder of the project and a feasible course of action for the merger process. A goal of introducing any issues that may affect the critical path for completion of the environmental document was also achieved.

Major topics of discussion are shown below.

- Kristina Soldberg opened the meeting introductions of attendees with and followed with the purpose of the project, description of alternatives and current project schedule. In Kristina’s discussion, she pointed out segment A, which has already been constructed. Kristina emphasized that the building of segment A limits the possibility of using previously analyzed crossovers and other alternatives, therefore the LEDPA by elimination has become the middle alternative.
- John Thomas representing the Corps of Engineers stated that conversations with the previous corps representative (Eric Alsmeyer) have confirmed that the corps concurred on the “middle” alternative. Based on the corps concurrence and the completion of the initial segment of the project to US 70, John recommended the project enter the merger process at concurrence point 2A/4A.
- Sarah McBride of the SHPO stated that the concurrence for the historic architecture is outdated and may need to be re-evaluated.
- John Hennessy of the DWQ recommended consulting the merger team before bypassing concurrence point 3 (LEDPA). John’s sentiment was moving the project without the other merger team member’s input may cause problems later in the permitting stage.
- Sarah McBride stated the SHPO cannot sign off on LEDPA because of the uncertainty of what is in place in the field. If the project is beyond the LEDPA stage, SHPO would prefer to have the merger meeting without seeking to sign a concurrence form for LEDPA.
- Sue Homewood of the DWQ suggested that NCDOT present the history of the project and how we arrived at the current point in which LEDPA has been established while seeking signatures for concurrence points 2A and 4A only.
- James Bridges of PDEA/NCDOT stated that because permits were issued for the portion of the project that has been built, proper coordination has taken place with the resource agencies. The endorsement of the already completed portion is somewhat of an endorsement for the remainder of the project because there are no alternatives that coincide with the completion of the project except the middle alternative.

- John Thomas (USACE) stated that because it is a pipeline project and the current status is limiting, we are in a position to move into avoidance and minimization within the 100 foot corridor. All questions need to be answered at the next meeting and nothing should go undone to resurface at the permitting stage of the process.
- John Hennessy stated that from the DWQ standpoint, that this would be Sue Homewood's decision because it is her project. John said he would have no problem supporting Sue's decision.

To wrap up the meeting, it was determined that the project should enter the merger process at a 2A/4A concurrence meeting. The concurrence meeting will include a history of how the project has arrived to its current position with an established LEDPA and a detailed plan of action for the remaining project schedule. The date for the concurrence meeting is anticipated to be in November 2005.

Subject: Final Minutes of the Interagency Hydraulic Design Review (4b) Meeting
on September 24, 2008 for U-2525B, Guilford County

Participants: **Team Members:**

Randy Henegar, NCDOT Hydraulics (present)
Andrew Williams, USACE (present)
Amy Euliss, NCDWQ (present)
Travis Wilson, NCWRC (not present)
Gary Jordan, USFWS (present)
Kathy Matthews, EPA (present)
James Speer, NCDOT Roadway (present)
Donnie Brew, FHWA (present)
Lonnie Brooks, NCDOT Structures (present)
Rachelle Beauregard, NCDOT NEU (present)
Patty Eason, NCDOT Division 7 (present)
David Harris, NCDOT REU (not present)
Beverly Robinson, NCDOT PDEA (not present)

Other Attendees

Danny Gardner, NCDOT Roadway
John Gauthier, NCDOT Roadway
Randy Griffin, NCDOT NEU
Tom Payne, NCDOT Structures
Paul Fisher, NCDOT Hydraulics
Lisa Feller, NCDOT PDEA
Brett Feulner, NCDOT NEU
Jamie Lancaster, NCDOT NEU
Zach McNeill, NCDOT PDEA
Daren Pait, Kimley Horn & Assoc.

Randy Henegar opened with a brief description of the project. He commented that throughout the project every effort has been made to protect water quality through best management practices, including discharging outfalls as far away from live streams as practicable, and specifying preformed scour holes wherever they can be effective. It was also noted that NEU and Kimley Horn & Assoc. have been studying this project to determine possible opportunities for mitigation, stream restoration and enhancement, etc. Mr. Henegar then proceeded to go through the plans sheet by sheet addressing the impacted streams or wetland sites.

Items discussed are summarized as follows:

1. Plan Sheets 4 & 5: The existing stream will be relocated to the west. This is Site #1 of the Natural Stream Design Study. A site visit will be scheduled prior to finalizing all of the Natural Stream Designs. Jamie Lancaster will set up the site visit prior to the Field Inspection. The upland wetlands at this site may be incorporated into preservation.
2. Plan Sheet 5: The upstream and downstream benches for the two barrel culvert will be made with rip rap. The voids will fill in and vegetation will form over time. A specific planting plan will not be done, except in cases where the bench is in a cut section.
3. General: All stream relocations, restorations and enhancements will be enclosed in right-of-way.

4. Plan Sheets 6 & 7: The stream leading into the 66" RCP will be restored. This is Site #2 of the Natural Stream Design Study.
5. Plan Sheet 7: The ditches in the wetlands will be allowed. The impacts will need to be shown on the Permit Drawings.
6. Plan Sheet 8: There seems to be a wetland boundary completely inside another wetland boundary. NEU should fix the wetland file to avoid confusion.
7. Plan Sheet 16: The stream will be enhanced both upstream and downstream of the 66" RCP. This is Site #3 of the Natural Stream Design Study.
8. Plan Sheet 18: Stream Restoration is proposed for 400' upstream of the 2 @ 7' x 8' box culvert. This is Site #4 of the Natural Stream Design Study. Hydraulics will investigate the impact of the 24" pipe discharging into the wetlands. The drainage in this area may be adjusted for the 4c Meeting.
9. Plan Sheet 20: The stream will be relocated upstream of the 2 @ 8' x 8' box culvert. This is Site #5 of the Natural Stream Design Study.
10. Plan Sheet 32: Hydraulics will check the velocity of the two pipes discharging into the same stream. Should velocities be erosive, the design will be adjusted.
11. Plan Sheet 33: The pond shown partially under the fill of -Y21- will be a complete take.
12. Plan Sheet 34: The discharge from the ponds near the Service Road (-I26-) should be treated as streams. Coordinate the classifications with Brett Feulner.



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

BEVERLY EAVES PERDUE
GOVERNOR

EUGENE A. CONTI, JR.
SECRETARY

December 30, 2009

MEMORANDUM TO: File

FROM: Lisa M. Feller, P.E.
Project Planning Engineer
Project Development and Environmental Analysis Branch

SUBJECT: Proposed Greensboro Urban Loop / US 29 interchange site
visit minutes, Guilford County, WBS Element No.
34821.1.1, TIP Project Nos. U-2525 B and C

On December 8, 2009, NCDOT and environmental agency personnel met at the proposed Greensboro Urban Loop / US 29 interchange location. Those in attendance included:

Andy Williams	U.S. Army Corps of Engineers (USACE)
Steve Kichefski	U.S. Army Corps of Engineers (USACE)
Amy Euliss	N.C. Division of Water Quality (DWQ)
Randy Henegar	Hydraulics Unit
Jim Speer	Roadway Design Unit
Danny Gardner	Roadway Design Unit
John Gauthier	Roadway Design Unit
Greg Price	PDEA - Natural Environmental Unit (NEU)
Beverly Robinson	PDEA - Project Development Unit
Lisa Feller	PDEA - Project Development Unit

The purpose of this meeting was to investigate the wetland and stream system located in Quadrant D and to familiarize the group with Quail Oaks subdivision in Quadrant A of the proposed Greensboro Urban Loop / US 29 interchange. This site visit was requested to assist the merger team members in approving an interchange re-design that reduces impacts to Quail Oaks subdivision but increases impacts to a large wetland and stream system. An informational packet was sent to the attendees prior to the meeting and is attached to these minutes. The following items were discussed:

- Within Quadrant D, there is a series of wetland areas with streams linking these areas. From visual inspection, it appears that part of the wetland area is an old pond bed. Impacts were recalculated to reflect a more accurate assessment.

- The attendees discussed whether the loop or ramp in Quadrant D could be moved to avoid the stream and wetland impacts. Moving the ramp and/or loop north is an option because NCDOT owns the land on the north side of the ramp. This move would result in wetlands being placed in the middle of the interchange, and placing the wetlands in the middle of the interchange would not be desirable due to canopy loss and viability issues.
- The attendees discussed whether other interchange designs could reduce impacts to Quadrant A and Quadrant D. No other designs could be conceived.

The site visit was adjourned. NCDOT will provide the requested information below to the merger team, and hold a Concurrence Point 4A Revisit meeting for the Greensboro Loop/US 29 interchange redesign.

Requested Information:

- NCDOT will provide classifications of the streams in Quadrant D.
 - *The streams in Quadrant D are intermittent and perennial.*
- NCDOT will recalculate wetland and stream impacts to exclude any stream footage that may have been originally included within the wetland boundaries.
 - *See attached revised tables.*
- NCDOT will provide information concerning the LEDPA determination.
- NCDOT will provide the Quail Oaks subdivision timeline that the Interim City Manager of Greensboro presented at the May 21, 2009 City Council meeting.

If there are any additions and/or corrections, please let me know.

cc: Attendees (via email)

Attachments

Lisa: Your e-mail refers to 'avoid major impacts'....are you referring to the increased relocations for the subdivision?

Yes, increased relocations

What are the substantial acquisition and relocation costs?

Quail Oaks Subdivision: 16 homes at \$150,000 per home = \$2,400,000 (cost of homes only)

Are these increased relocations relevant or significant to the overall relocations for the U-2525 project?

2005 R/W estimate: U-2525B – 36 residences, U-2525C – 19 residences. There will be 16 additional residential relocatees to add without a re-design.

How do these costs compare to the overall project costs for the Greensboro Eastern Loop?

U-2525B R/W cost = \$12,410,000 and Construction cost = \$128,800,000

U-2525C R/W cost = \$5,960,000 and Construction cost = \$93,000,000

16 additional homes cost \$2,400,000.

Was the current interchange design presented to the public at one of the EIS hearings?

No, the current design was presented at our January 2009 public meeting.

Do you have a copy of the FEIS and could you make it available for the field re-visit? **Yes, I also have the documents in pdf format that I can fts.**

What are the actual increases in jurisdictional wetland and stream impacts from a re-design?

See attached table

What information does the MPO (have) regarding the siting of a subdivision in the middle of a proposed interchange for a project that was included as part of the 2035 LRTP?

The interchange was in the process of being re-designed based on US 29's future interstate designation when the subdivision was being planned.

What is the quality and quantity of the streams and wetlands being impacted?

See attached table. The quality will be discussed at the December 8, 2009 field visit. I will provide meeting minutes following the meeting.

What specific CWA Section 404(b)(1) avoidance and minimization measures is the NCDOT willing to commit to in order to get a re-design approved?

This item should be discussed with the Merger Team.

By missing the subdivision, are you increasing the noise receptor impacts?

No - Noise impacts were reviewed when DOT discovered that the current interchange design was outside of the original study corridor in the Quail Oaks area and impacted the subdivision. Noise abatement did not meet reasonable and feasible criteria of the NCDOT Traffic Noise Abatement Policy. The re-design is within the original study corridor and further away from the subdivision.

Are their going to be additional noise issues as there is with at least one other recently completed Guilford Co. project?

There may be complaints about noise issues.

With a 're-design'... are you proposing to hold another public hearing?

NCDOT will hold a small group meeting with Quail Oaks subdivision and a public meeting for everyone in the project area. Also, NCDOT will be holding Corridor Protection hearings for U-2525 and U-2524.

If U-2525A is already built, did the USACE permit the whole project of just the earlier segment?

U-2525A was permitted separately.

As NCDOT project engineer, are you 'empowered' to make CP 2A/4A decisions (that involve \$\$\$) for the department?

I am not individually empowered to make CP 2A/4A decisions that involve \$\$\$ for the Department; these decisions should be made by the Merger Team. If decisions cannot be made by the team, we can discuss issues with upper management.




STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

BEVERLY EAVES PERDUE
GOVERNOR

January 7, 2010

EUGENE A. CONTI, JR.
SECRETARY

MEMORANDUM TO: J.M. Mills, PE
Division Engineer



FROM: Gregory A. Smith, PE
Traffic Noise & Air Quality Group

SUBJECT: Review of Traffic Noise Analysis
Greensboro Eastern Loop / US 29
U-2525B

The Traffic Noise & Air Quality Section reviewed proposed realignment of -Y13RPA- to determine whether significant design modifications have occurred with respect to those investigated in our original Traffic Noise Analysis. We compared the current alignment with that found in the original "Texas Box" interchange (see attached plan). No noise abatement measures were recommended for this area in our original analysis.

When a significant design change occurs, it may be necessary to determine noise level impacts on nearby residences caused by the change. The Traffic Noise & Air Quality Group considers a horizontal design modification to be "significant" when an alignment shift moves a travel lane closer to noise receptors by one-half or greater the distance between the original alignment and any residences. Sound levels increase approximately 3 dBA with each halving of distance from their source; therefore, relocating a travel lane to one-half its original distance from residences causes an approximate 3 dBA increase in external noise levels for the residences. A 3 dBA increase is only barely perceptible by most human beings.

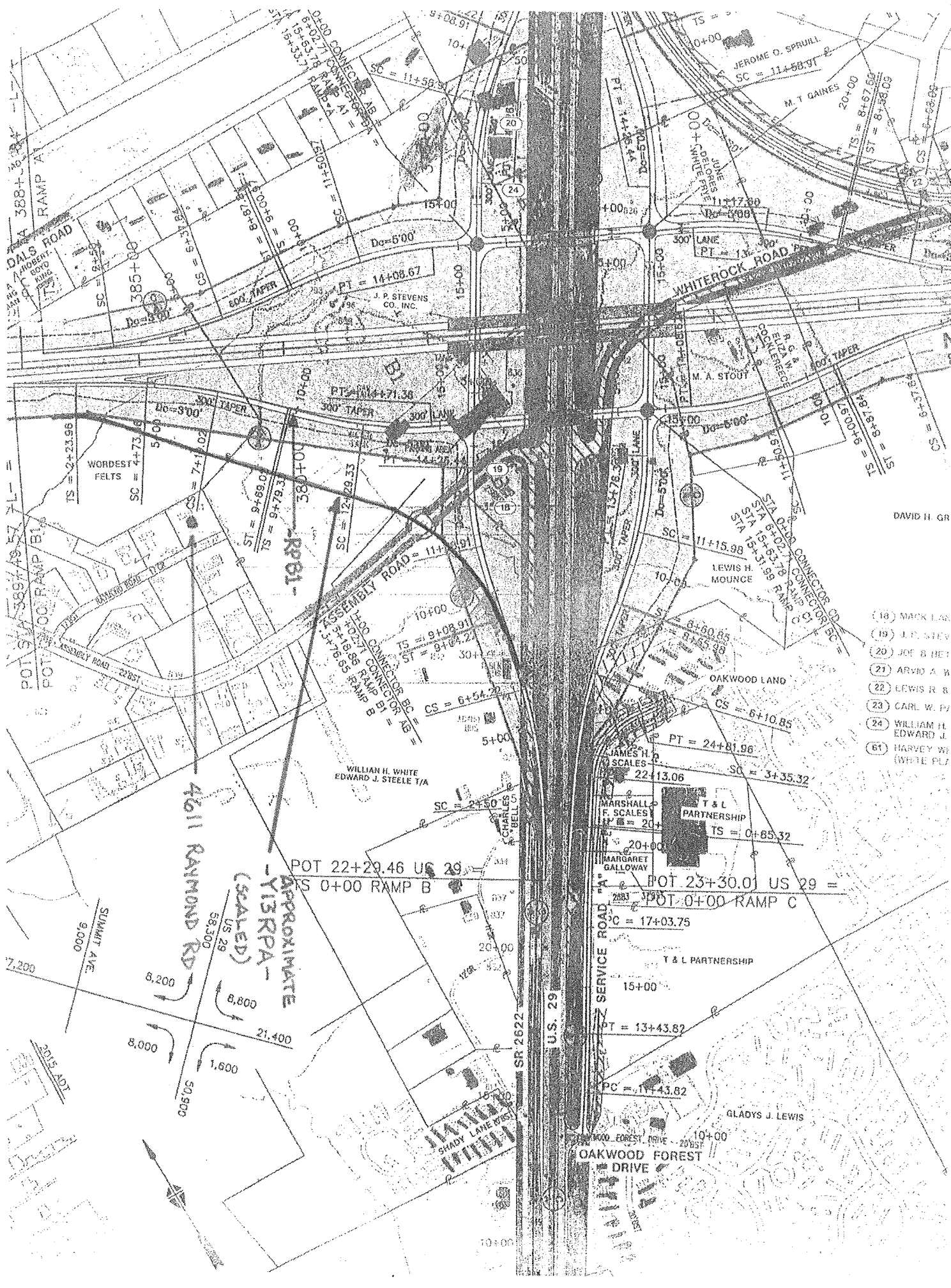
We determined that the alignment of -Y13RPA- approximately halves the distance between the original alignment (-RPB1-) and one residence at 4611 Raymond Road. All other residences are located further from the current proposed alignment of all residences in existence on the project's date of public knowledge. Revisions to the original Traffic Noise Analysis are not warranted when only one residence is potentially impacted.

Based upon this information, it is not reasonable, as defined in the NCDOT Traffic Noise Abatement Policy, to investigate noise abatement provisions for any noise receptors in the southwest quadrant of the proposed Greensboro Eastern Loop / US 29 interchange. Please contact me at (919) 431-2010 or at gasmith@ncdot.gov if you need additional information.

MAILING ADDRESS:
NC DEPARTMENT OF TRANSPORTATION
HUMAN ENVIRONMENT UNIT
1598 MAIL SERVICE CENTER
RALEIGH NC 27699-1598

TELEPHONE: 919-431-2000
FAX: 919-431-2001
WEBSITE: WWW.NCDOT.ORG

LOCATION:
ENVIRONMENTAL RESOURCE CENTER
4701-116 ATLANTIC AVENUE
RALEIGH NC 27604



DAVID H. GR

- (18) MACK LAN
- (19) J.P. STEV
- (20) JOE B. BEI
- (21) ARVID A. W
- (22) LEWIS R. B
- (23) CARL W. P
- (24) WILLIAM H. EDWARD J.
- (61) HARVEY W. (WHITE PL)

POT 22+29.46 US 29 =
POT 0+00 RAMP B

POT 23+30.01 US 29 =
POT 0+00 RAMP C

APPROXIMATE
YISRA-
(SCALED)
US 28

SUMMIT AVE
9,000

8,200
8,800
21,400
1,600
50,900

T & L PARTNERSHIP

PT = 13+43.82

PC = 11+43.82

GLADYS J. LEWIS

OAKWOOD FOREST DRIVE